

**Claims:**

1. A network of computers comprising:

5 a plurality of individual computer devices each having a non-volatile data storage device and each having means (305) for communicating with at least one other one of said plurality of computers;

10 each said non-volatile data storage device being divided into a first data storage area reserved for use by the corresponding computer device, and a second data storage area reserved for backup storage of data contained in at least one said first data storage area of at least one other said non-volatile data storage device;

15 a data protection component for providing data protection for user data stored on each of the non volatile data storage devices by storing the user data which is resident within the said first data storage area of each non volatile data storage device, in one or a plurality of said second data storage areas of other said non volatile data storage devices.

20 2. The network of computers as claimed in claim 1, comprising a set-up component for defining said data storage devices into a data protection group in which data from each of the plurality of data storage devices in the group are distributed amongst the plurality of data storage devices in the group.

25 3. The network of computers as claimed in claim 1, comprising:

a sizer configured for selecting a size of a first and a second data storage area of each of said plurality of non-volatile data storage devices.

30 4. The network of computers as claimed in claim 1, further comprising a finder for finding a plurality of non volatile data storage devices.

5. The network of computers as claimed in claim 1, further comprising;

a selector for selecting individual ones of said plurality of non volatile data storage devices.

5

6. The network of computers as claimed in claim 1, comprising:

a scheduler for scheduling copying of data between individual ones of said plurality of non-volatile data storage devices.

10

7. The network of computers as claimed in claim 1, comprising:

a mode selector for selecting between a distributed mode of data copying, in which data of each of a plurality of said first data areas is copied to a plurality of said second data areas, and a redundant mode in which data of each said first data storage area is copied to said second data storage areas of all of the other ones of plurality of non-volatile data storage devices.

15

8. A computer entity comprising:

20

at least one data processor;

at least one non volatile data storage device being divided into a first data storage area as a reserve for use by data of said computer entity, and a second data storage area reserved for storage of data contained in at least one other computer entity; and

25

a data protection component for providing data protection for user data of said at least one other computer entity.

30

9. The computer entity as claimed in claim 8 further comprising:

at least one network port;

a data transferor component for sending a copy of said data stored in said first data storage area to said network ports.

5

10. The computer entity as claimed in claim 8, further comprising:

a finder component for finding at least one other non volatile data storage device.

10

11. The computer entity as claimed in claim 10, further comprising:

a selector component for selecting at least one individual one of a plurality of unrelated non volatile data storage devices.

15

12. The computer entity as claimed in claim 10, wherein said means for storing said received data in said second data storage area operates to store data relating to a plurality of other computing entities in said second data storage area in a striped distributed format.

20

13. The computer entity as claimed in claim 10, wherein said means for storing said received data in said second data storage area operates to store a plurality of individual blocks of data each relating to a corresponding respective other computer entity, in a plurality of partitions of said second data storage area, such that data of each said other computing entity is stored in a corresponding respective said partition.

25

14. A method of data protection in a network of computer entities comprising a plurality of individual computer entities, each having a data processor, and at least one non-volatile data storage device, and each having means for communicating with at least one other of said plurality of computer entities, said method comprising the steps of:

30

T030090" 05652860

for each said computer entity;

dividing a said non-volatile data storage device of said computer entity into  
5 a first data storage area, and a second data storage area;

assigning said first data storage area for use in storing data for the  
operation of a corresponding said respective said data processor; and

10 assigning said second data storage area for storage of data by at least one  
other said computer entity.

15 15. The method as claimed in claim 14, further comprising the step of:

for each said second data storage area;

partitioning said second data storage area into a plurality of partitions; and

20 assigning each said partition for storing data specific to a corresponding  
respective other one of said plurality of computer entities.

25 16. A method of data protection in a network of computer entities, each  
said computer entity comprising at least one data processor and at least one non-  
volatile data storage device;

each said non-volatile data storage device being divided into a first data  
storage area dedicated for use by a said corresponding respective computer  
entity, and a second data storage area dedicated for use in storing data of at  
least one other one of said plurality of computer entities;

30

said method comprising the steps of:

searching said network of computer entities to find at least one non-volatile data storage device and selecting individual ones of said at least one non-volatile data storage devices; and

5 copying data stored in a first said data storage area of a first said non-volatile data storage device into a second said data storage area of a second said non-volatile data storage device.

10 17. The method as claimed in claim 16, wherein

each said second data storage area is arranged into a plurality of partition areas, and each partition area of an individual said second data storage area is assigned to store data of a corresponding respective other said data storage device.

15 18. The method as claimed in claim 16, wherein,

for each of said plurality of computer entities:

20 data stored in a said first data storage area of said at least one data storage device of said computer is replicated and stored in a plurality of second data storage areas of a plurality of other said computer entities within said network.

25 19. The method as claimed in claim 16, wherein

each said computer entity writes a write data to its corresponding said at least one data storage device;

30 upon a said computer entity writing a said write data, said computer entity sends a copy of said write data to at least one other computer entity of said plurality of computer entities in said network; and

-30-

said at least one other computer entity stores said write data in a second data storage area of a said data storage device of said other computer entity.

20. The method as claimed in claim 16, wherein:

5 data stored in a first said data storage area of a first computer entity is stored as a stripe in a plurality of said second data storage areas of a plurality of other ones of said computer entities comprising said network.

10 21. A method of data protection in a computer entity comprising at least one data processor, at least one non-volatile data storage device, and a network port, said data storage device being divided into a first data storage area dedicated for use by said processor, and a second data storage area dedicated for use in storing data unrelated to said processor:

15 said method comprising the steps of:

finding a plurality of other non-volatile data storage devices of other computer entities and selecting individual other said non-volatile data storage  
20 devices;

receiving via said network port a said data unrelated to said processor; and

25 storing said received data in said second data storage area of said non-volatile data storage device.

22. The method as claimed in claim 21, wherein:

30 said received data comprises data of a plurality of different other computer entities;

said second data storage area is arranged into a plurality of different partitions; and

said step of storing said received data comprises:

5

storing received data of each of said other computer entities in a corresponding respective said partition.

23. The method as claimed in claim 21, wherein:

10

said received data comprises incremental backup data of at least one other computer entity, said incremental backup data comprising files which have been rewritten to be different on said first data storage area compared to at least one corresponding file in a said second data storage area.

15

24. The method as claimed in claim 21, wherein said received data comprises a write data sent by at least one other computer entity in response to a plurality of write events occurring locally on said other computer entity.

20

"05552650" 030904